SIEMENS

ARCOSKOP

SP

System - Manual

Start-up Instructions

English
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Chapter	Page	Revision
0	all	01
1	all	01
2	all	01

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Tools, auxiliary materials

- Tool kit 97 02 457 Y1971
- Protective conductor meter 44 15 899 RV090
  or Bender safety tester 97 06 979 Y0526
- Dynamic test kit 37 90 156 X1963
- Cu filter set 44 06 120 RV090
- Densitometer 97 02 416 Y1996
- X-ray filter set, 25 mm AL 97 98 596 G5321
- Resolution tests 28 71 820 RE999

  (Only if the local voltage supply differs from the delivery status of the ARCOSKOP. Refer to "Note on line voltage" and "Notes on equivalent patient leakage current".)

Note on logbook

The logbook is located in the monitor carriage behind the keyboard. The logbook can be accessed by removing the cover on the back of the monitor trolley.

Note on line voltage

The line voltage values for ARCOSKOP upon delivery are shown on the supply voltage plate (back of monitor trolley).
Adapt the ARCOSKOP to the local conditions according to the service instructions for the system.

Ensure compliance with the notes on equivalent patient leakage current.

Notes on equivalent patient leakage current

Regulations and applicability for subsidiaries

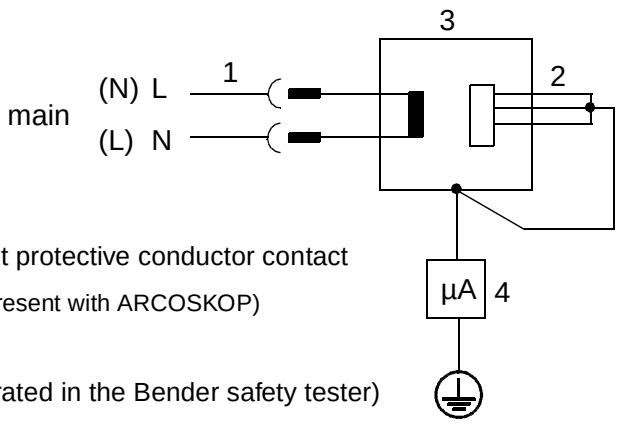
Perform the equivalent patient leakage current measurement in countries where DIN VDE 0751 Part 1 applies. In countries where DIN VDE 0751 does not apply, comply with the following: (refer also to ARTD part 2 (CD-ROM), Safety Rules for Installation and Maintenance).
Subsidiaries must ensure compliance with all national regulations. In case such regulations do not exist, the instructions in this document should be followed to ensure the safety of customers, patients, technical personnel and all other people involved.

Initial value measured

The equivalent patient leakage current was measured at the factory and the resulting value was recorded in test protocol 1b. The measurement was performed using the line voltage and line frequency recorded in test protocol 1b. Test protocol 1b is located in Register 3 of the logbook. If the line voltage and line frequency match those recorded in test protocol 1b, use the value recorded in the protocol as the first value measured in the equivalent patient leakage current / protocol.
If the local line voltage or line frequency differs from those of the ARCOSKOP Compact upon delivery, the values indicated in protocol 1b are invalid and should be marked as such. (Cross them out, enter "values invalid", sign your name and date the entry.) In this case, the equivalent patient leakage current measurement must be performed again. Perform the measurement according to DIN VDE 0751, part 1 (refer to ARTD part 2 (CD-ROM)) and record the value determined as the initial value measured. This value must not exceed the maximum values permitted for equivalent patient leakage currents for devices according to IEC 601 part 1/VDE 0750 part 1 of 2mA. Enter the value measured in the equivalent patient leakage current / protocol (chapter 2 of these instructions). Ensure compliance with the measurement configuration in Fig. 1. ARCOSKOP must be switched on during the measurement. For this reason, the Bender safety tester, if used, must be set to manual. Remove the page containing the protocol from this document and file it in Register 3 of the logbook.

Repeat measurement

When maintenance or repairs of the primary circuit of the line voltage are performed (for example: repairing the ON/OFF circuit or replacing the line voltage filter), the equivalent patient leakage current measurement must be performed again. The measurement configuration shown in Fig.1 must be used. ARCOSKOP must be switched on during the measurement. For this reason, the Bender safety tester must be set to manual mode if it is used. The values determined during the repeat measurement must not exceed the limit value specified in VDE 0751, part 1 of 2 mA (refer to ARTD part 2. In addition, they may not exceed the first value measured by more than 50%. If the limit value is exceeded, the ARCOSKOP must be repaired. Record the value measured in the equivalent patient leakage current / Protocol (logbook, Register 3).



1 unit connection lead without protective conductor contact

2 patient connection lead (not present with ARCOSKOP)

3 system housing

4 measurement circuit (integrated in the Bender safety tester)

Fig. 1 Measuring the housing leakage current for systems in operation

Checking the temperature indicator

Check the temperature indicator on the exterior housing of the I.I.

- If the inner square field of the indicator is white, the I.I. was not subjected to excess temperature. Remove the temperature indicator.
- If the indicator is discolored (inner field black), proceed according to IQ document RXD0-000-038.01...

Notes on country-specific programming

1. Fluoroscopy time limit

According to E DIN IEC 62B/293/CDV, the fluoroscopy time limit is programmed to switch off radiation after 10 minutes of fluoroscopy. The buzzer sounds after 5 minutes of fluoroscopy. In countries not subject to E DIN IEC 62B/293/CDV, the fluoroscopy time limit with automatic switch off of radiation can be set to 5 minutes (buzzer sounds after 4.5 minutes of fluoroscopy) or 10 minutes (buzzer sounds after 9.5 minutes of fluoroscopy), or no automatic switch off of radiation can be selected (buzzer sounds after 4.5 minutes of fluoroscopy) using the service PC. Compliance with the applicable laws of the country must be ensured.

2. Audible signal for fluoroscopy

The audible signal for fluoroscopy is disabled when the ARCOSKOP is delivered. Therefore, an audible signal will not sound during fluoroscopy. If country-specific regulations require that an audible signal sound during fluoroscopy, it can be programmed via the service PC. Corresponding parameter: "Buzzer and block time settings" - "Buzzer mode (FL / IFL / DR)".

3. Memoskop Fast, country-specific configurations

The following parameters can be programmed to comply with country-specific requirements and should be modified accordingly on-site:

User Setup:	"set date / time" "hospital name"
Programming:	Refer to the operating instructions for ARCOSKOP.
Technical Setup:	"Date / Time format" "Language"

Programming the parameters:
Refer to the MEMOSKOP Fast Service Software, Helpfile.

Function tests

(Operation of the ARCOSKOP, refer to the Operating Instructions)

- Suspension movements and movements of the C-arm system
- Semi-transparent slot collimator and iris collimator
- Setting of semi-transparent slot collimator and iris collimator
- Image intensifier format changeover
- Image reversal
- Image position and image rotation
- Fluoroscopy / Pulsed Fluoroscopy
- Image storage
- Digital Radiography (DR)
- DCM
- Mechanical functions of the monitor trolley
- Subtraction option
- Roadmap option
- Image storage functions
- Dicom bridge option
- Laser light localizer option
- Area dose product option: indication cGy * cm^2 (Diamentor)
- Videoprinter option
- Videorecorder option

Recorded tests

The certificates and directions required are filed with the logbook.

- Perform the IQ quick test

If set organ programs were changed on a ARCOSKOP system, it is advisable to print out the values programmed and enter them in the chapter "Curves and Diagrams" of the Operating Instructions.

- Perform the country-specific acceptance test (DHHS / RöV ...)
- Record the equivalent patient leakage current in the protocol (Chapter 2 of these instructions) and file it in Register 3 of the logbook (only if the local mains voltage deviates from the factory-set nominal mains voltage).
  Refer to Note on line voltage and Notes on equivalent patient leakage current.

Final steps

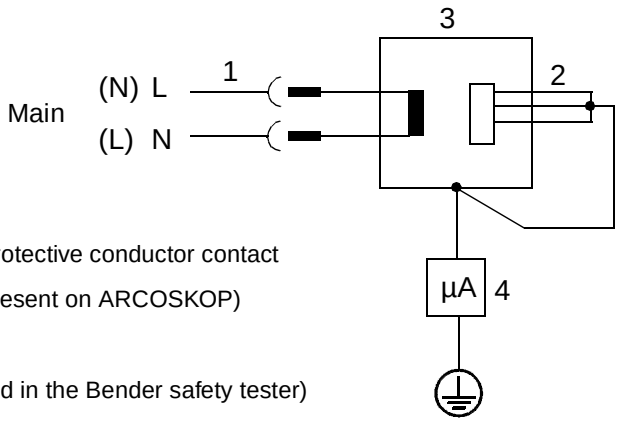
- Perform the protective conductor test according to ARTD part 2; protective conductor resistance ≤ 0.2 ohm.
- Final visual inspection:
  - Look for physical damage.
  - Ensure that all parts are secured properly
  - Ensure that all movable parts move freely
- Turn over the documents to the customer.
- File the back of the of the quality certificate (installation and start-up) in the Register 3 of the logbook.
- If problems are detected, send the quality certificate to the address indicated.

Measurement configuration: refer to the illustration on the following page

	Equivalent leakage current	Measurement device used, serial no.	Name	Date	Initials
Initial value measured					
Repeat measurement 1					
Repeat measurement 2					
Repeat measurement 3					
Repeat measurement 4					
Repeat measurement 5					
Repeat measurement 6					
Repeat measurement 7					
Repeat measurement 8					
Repeat measurement 9					
Repeat measurement 10					
Repeat measurement 11					
Repeat measurement 12					
Repeat measurement 13					
Repeat measurement 14					
Repeat measurement 15					
Repeat measurement 16					
Repeat measurement 17					
Repeat measurement 18					
Repeat measurement 19					
Repeat measurement 20					

Tab. 1

Configuration for measuring equivalent leakage current



1 unit connection lead without protective conductor contact

2 patient connecting lead (not present on ARCOSKOP)

3 unit housing

4 measurement circuit (integrated in the Bender safety tester)

Fig. 1 Measuring the housing leakage current on units in operation

TD SD 24 / Fürstenberg
TD SD 24 / Groß
SMS Iselin / Klenk